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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,433	04/27/2006	Shinje Kim	1012679-000120	2079
21839	7590	09/09/2010		
BUCHANAN, INGERSOLL & ROONEY PC			EXAMINER	
POST OFFICE BOX 1404			IIBRAHIM, MEDINA AHMED	
ALEXANDRIA, VA 22313-1404				
			ART UNIT	PAPER NUMBER
			1638	
NOTIFICATION DATE	DELIVERY MODE			
09/09/2010	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
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Office Action Summary	Application No. 10/577,433	Applicant(s) KIM ET AL.
	Examiner Medina A. Ibrahim	Art Unit 1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 26 July 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) 11-13 and 17 is/are withdrawn from consideration.
 5) Claim(s) 1 and 4-10 is/are allowed.
 6) Claim(s) 2,3 and 14-16 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 27 April 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statements (PTO/SB/08)
 Paper No(s)/Mail Date 04/27/06

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, claims 1-3, 5-10, and 15-16, in the reply filed on 07/26/10 is acknowledged. Claims 4 and 14 are rejoined with the elected group. The requirement is made Final

Claims 1-17 are pending.

Claims 11-13 and 17 are withdrawn from consideration as being directed to the non-elected invention.

Claims 1-10, and 14-16 are examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Staskawicz et al (US 6,262, 343; Accession no AAF633301; deposited 02 May 2001).

The claim is directed to a primer for the detection of cucumber mosaic virus resistant plants which comprises consecutive nucleotides of SEQ ID NO: 2 or 22.

Staskawicz et al teach an isolated nucleotide comprising 18 contiguous bases of SEQ ID NO: 22 (see alignment of sequences shown below). The intended use of the claimed invention must result in a structural difference between the claimed invention

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and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The cited reference teaches that the Bs2 nucleic acid molecule, which a disease resistance gene, is also useful as polymerase chain reaction (PCR) primers.

RESULT 2
AAF63301/c
ID AAF63301 standard; DNA; 31491 BP.
XX
AC AAF63301;
XX
DT 02-MAY-2001 (first entry)
XX
DE Pepper Bs2 resistance gene.
XX
KW Bs2; pepper; pathogen resistant; Xanthomonas campestris pv vesicatoria;
KW Xcv; bacterial spot disease; transgenic plant; crop; fruit; flower; ds.
XX
OS Capsicum annuum.
XX
PN US 6262343.
XX
PI Staskawicz BJ, Dahlbeck D, Tai TH;
XX
DR WPI; 2001-168560/17.
DR P-PSDB; AAB72198.

Query Match 21.2%; Score 1186.2; DB 1; Length 31491;
Best Local Similarity 66.9%;
Matches 1827; Conservative 0; Mismatches 878; Indels 24; Gaps 9;

Qy 367	308 CTTGATAAGGGTTGATCCACCCCTAGTATTCTCTGTAGGGTGCTCCTCTGCTATTATT	
Db 24388	CTAGACAAAGGTTTATTCTGCCTACTGTTCCCATGGGTACACCCGTGCTCTCGTG	24329

Qy 368 TGTTAGAAAAGATGGTCCCTTGTAGATGTTAGATTATCGCTAGTTGAATAAGGTGACT
427 | |||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Db 24328 CGAAAGAAGGATGGTCCCTCGGATGTGCATAGACTACCGTCAGTTGAATAAGATCATG
24269

Qy 428 ATGAAGAAAAAGTACCCCTCCCTAAGATGATGATTATTCATCCAGCTCAGGGTGCA
487 ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 24268 ATTAAAAATAATATCCTTCCTAGGATTGATGACCTTTGACCAGCTCAGGGTGCT
24209

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Qy 488 AAGTACTTTCTAAAATACTCTGTTAAGGTTATTATAGTTGAAAATAGGGATGTG
 547 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 24208 AAGTGCTTTCAAAAATAGACCTCGTCGGGTTACCACAGTTGAAAATAGGGAGTC
 24149

Qy 548 GATATCCCTAAGGCTACTTTCAAAACCCAGTGGTCATTATGAGTTTGGTATGTC
 607 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 24148 GACATACCAAGACAGCCTCCGAACCGGATATGGTCACTACAAATTAGTCATGTC
 24089

Qy 608 TATGGTTTGACTAATGCTCCGGTGGCAATCAAGGATCTTATGAACATAGTATTCTGTTAG
 667 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 24088 TTCGGGTTGAGTAACGCCCTGCAGCCTTCATGGATCTTATGAGTAGAGTGTCCGCTAA
 24029

Qy 668 TTCTGGATTATTTGTTATTGTGTTAATAGATGATTTGGTATATTCTAAAGAGCGAG
 727 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 24028 TTTATTGACTTGTTCGTATTGTTATTGATAATATTCTGATCTATTCTAAAGAGTAAA
 23969

Qy 728 GCTGATCACGCCGATCATCTCCATATAGTATTGCAAACCTTTAAAGATCAACTGTTGAC
 787 ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23968 GAGGATCACACCAATCACCTCCGAATTCTTCAGACCCCTAAGGATTACAACTATAT
 23909

Qy 788 GCCAAATTCTAAGTGTGAATTATGGTTGAATGTGGTACCTTCCTGGTTATATTATT
 847 ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23908 GCCAAATTCTAAGTGTAAATTCTGGTTACGCTATTGACTTCCTGGGCATATTGTG
 23849

Qy 848 TCTAGTGAGGGATTATGGGGATCCACAAAAATTATGCGGTGAAGAAGTGGCTAAA
 907 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23848 TCCAGTGACGGAATAAGAGTGGATCCCTAGAAAGTTGAAGTAGTGAGGAAAAAGGCCTAGA
 23789

Qy 908 ACCATGATTCCAACCAATTTAGAG-TTTTGGTTTAGTTAGATATTATAGGAGTT
 966 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23788 CCCACGACTCCAACCGATATTGAGCTTTGGGTTGGCGGGGTATTACAGAAGGTT
 23729

Qy 967 GTGGAGAGTTTCTCATCAATTGATGCTCTATTATAAGTTAACCTAGAAAAAGGTATG
 1026 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23728 GTAGAAAGTTTCTTCATAGCTCTCCGCTTACTAAACTGACTCA-AAAAAAAGATGAA
 23670

Qy 1027 GTTTCTATGGTCCAATGCTTGTCAAGGGTAGCTTGATAAGTTGAAGGATAAGTTGACTTT
 1086 ||||| ||||| ||||| ||||| ||||| ||||| |||||
 Db 23669 GTTTGAGTGGTCTGACTTGTGTGAAAACAGTTGAGAAATTGAAGGACAAGCTGGCTAC
 23610

Qy 1087 GGATATGATCTTGACCCCTACCCGAAGGTTTAATGTTT----TTAATTTGATGCATC
 1142 ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

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Db	23609	TGCTCTTGTGTTGACCCTCCCGAGGGTAGATAATTTGTGGTTATTGTGATGTGTC
23550		
Qy	1143	CCGTGTAGGACTGGTTGTGTTGATGTAGAAACAATAGGGTCTGGCTATGCTCTA
1202		
Db	23549	CCGTATGGACTTGGTTGTATTGATGAAG-CGTGGTAAGGTGATAGCTTATGCATCTA
23491		
Qy	1203	GGAAATTGAAAGTTCATGAAATGAAATTATGCGACACATAACTAGAATTATTAGTTGG
1262		
Db	23490	GGCAGTTAACGGTGCATGAGTGCATTACCCACTCATGACTTTGGAGTTAGCAGCCGTTG
23431		
Qy	1263	TATTTTCATTGAAGCTTAGGTATCGTTATTTGTATGG-GTTCATGTTGATATATGTTTG
1321		
Db	23430	TGTTGTACTTAGAATCTGGAGGCACTATCTCATGGAGTGCATGTTGATATTACTG
23371		
Qy	1322	ATCATAAGATTCTGTAGTATGTGTCACCCAGAAGGAGTGAATCTCAGGCCAAAGGACAT
1381		
Db	23370	ACCATAAAGTTTACACTATGTTCTACAGAAAGATTAAACCTTAGGCAGAGGCGTT
23311		
Qy	1382	GGCTTGAGTTCTCAAAAGCTATGACATTAGTCTCCATTACACCCAGGTAATCTAAC
1441		
Db	23310	GGATAGAGCTTTGAAAGACTATGATATGAGTCTGCATTACCATCCGGCAAGGCAAATA
23251		
Qy	1442	TGGTTGTTGGTATTCTTAGTAGGTTGTCATGGGAGATTATAAAATATGGATGAGGAAA
1501		
Db	23250	TTGTAGCCGACGCCCTAGTAGGTTCTATGGGCAGCCTTCTATGAGAAGAAGGAA
23191		
Qy	1502	AATGAGATTGGTGAAGTATATTACCGATTGGTAACCTGGAGTTCTGCTTTGGATT
1561		
Db	23190	AGAAAGAGATGGTGAAGGATATTACCCGCTTGCAAATATGGAGTGCAGCTTGTAGATT
23131		
Qy	1562	CTGAGGATGGAGGTATGGTGTCAAGAGGGTGTGAAGTCATCTCTTAGTGTGAGTTAA
1621		
Db	23130	CCGAAGATGGAGGGGTATTGTCATGAGTTAGCTAAGTCATCTCTTGTCGTGAGTTA
23071		
Qy	1622	AAGCGAAACATGCTTGGATCCTATCTTAATGCAAATCAAAGATGATGTGGGTCACAGA
1681		
Db	23070	AGGAGAACGGTTGAAGATCCCCTGATGAAATCAAGAAAGATGTGGGTCACAAA
23011		
Qy	1682	AGGTTATGGCCTTCAAGATTGGTAGAATGGTATTGAAAGGTACCAAGGTAGATTGTGTC
1741		
Db	23010	TGGTTATGTCATTGAAATTAGTGGCGATAGTATTCTGAGATTTCAGGGTAGGTTGTGCG
22951		

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1801	1742	TTACCGATGTTAATGGGTTATGAGAATGAATTGGTTGAAGCTCATGAGTCGTGATT
22891	22950	TTTCGAATGCGATGGGATACGAGAAAAGAACCTTAATGAGGCGCACACTTGAGGTATG
Qy	1802	TGGCTCATCTGGGTTGACGAAGATGTACCATGATTGCAAGGAGATTATTGGTTGAATA
1861	1862	ATATGAAGAGAGATGTGGCAAATTGGTTGCTATGTTCATGGTTGCCAACAACTGAAGG
Db	22890	TCATTCAACCCAGGCTCTACTAACATGTACCATGATCTAAAACCTTGATTGGTTGAATA
22831		
Qy	1862	ATATGAAGAGAGATGTGGCAAATTGGTTGCTATGTTCATGGTTGCCAACAACTGAAGG
1921	1922	TATTTTCT
Db	22830	ACATGAAACAGTGTAGCTGATTGTGCTTGTGCTTCAAGTGTGAACTGTCAACAAATGAAGG
22771		
Qy	1922	TGGGGAACCTAACGGCTGGTG-----GATTCTATCGCTCGTGTGGAAGTGAAG
1968	1923	TATTTTCT
Db	22770	TAGAACACATGAGGCCAGGTGGTACTTCCAAAGAGATAGCCTGCCTTATGGAAGTGG
22711		
Qy	1969	AGGTAATCAGTATGGATTGGTTCCAGTCTTCCACGGTCTCGTAGTAAATTGTTGAA
2028	1970	T
Db	22710	ATATGATAAACATGGACTTCATTACAGGACTTCCGAGATCCGAAACCCAGTATGTTCA
22651		
Qy	2029	TTTGGGTATCATTGATAAGGATGTCTAACGTCCTACTCACCTTCCAGTGAGGACTAATT
2088	2030	T
Db	22650	TATGGCGATTGTAGATCGGTTGACCAAGTCAGCCTACTTTTCCGTGAGGACTAATT
22591		
Qy	2089	ATTCACTGGGAGACTACCGGAAGTTTCTTCAATTAGGATATCATCAAGTTGATGGTGT
2148	2090	T
Db	22590	ATTGGGAGAGGTTATTCTAACAGATTACATTGAGGAGATAGTCGATTGATGGGCAC
22531		
Qy	2149	TAGTTCTATTATCTGATCGAGGACTACAGTCTCTCTCTCTCTCTCTCTCTCTCTCT
2208	2150	T
Db	22530	CAATGTCATTATACCGATAGAGGTACGAGTTCTACAGTTGGAGATCTGATGGCAC
22471		
Qy	2209	ATGTAGGTTGGGACTAACGGTAAACCTTACCATTTCCACCCACAGAAAGATGTAC
2268	2210	T
Db	22470	AGAAGGGTTAGGTACACAAGTGAATTGAGCACAGGTTCCACCCCTAGACGGATGGAC
22411		
Qy	2269	AAGCAGAGGAGACTATTCAAGACTTGGATAGTATGCTAACAGTATTGTGATTAACATT
2328	2270	T
Db	22410	AAGCTGAGGGTACCATCGAACCTCGAAGATATGTTAGGGCATGCCATTGATTCA
22351		
Qy	2329	GTGGTATTGGGTTACCATATGCCCTCTTACTGTTGTGTATAATAACAACTATT
2388	2330	T
Db	22350	AAGGTAGTGGGTAGATCACCTGCCACTGGTTGAATTGCTTACAAATAACTACCATG
22291		

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Qy	2389	CTAGCATTCAGAT-GCCCCGTTGAGGCTTGGATGGTAGGAGATGTCCTCTCCATTG
2447		
Db	22290	CCAGCATCAAGATGGCTCTTGGAGGCTTGTATTGGAGGAGATAGTCTCCGATAG
22231		
Qy	2448	GGTGGTTCAAATTGGTAAGACTAGATTGGTCAGCCTGGACTTGTATGAAGCTATAG
2507		
Db	22230	GATGGTATGAAGTGGTGAGACTCAGTTGTATGGCCTAATCTTGTATAGGGATGG
22171		
Qy	2508	ATAAGGTGAAGGTGATTAGGGATATTCTTAATACCACCCAATGTCACCAAAATTCTATG
2567		
Db	22170	AGAAAGTCAAAGACTGCTCAAAGTCGTTAGATGTCCTATG
22112		
Qy	2568	TAGACGTGAGGCCAAGAGAGTTAGAGTTGATGTTGGCAATTAGGTGCTCTGAAAATAT
2627		
Db	22111	CCGATGTTCCGGAGAAAGAGAACTAGAGTTGAAATTGGTATGGGTGTTCTCAAGGTTT
22052		
Qy	2628	CCCCCATGAAGGATGTGATATGATTTGGGAAAGAACGGAAAGCTCAGTCCTCGTTATGTT
2687		
Db	22051	CTCCTATGAAAGGAGTTATGCGATTGGAAAAGGGTAAATTGAGCCCTCGTTAT-TAG
21993		
Qy	2688	GCTCGTACTTGAACCTTAGGAGAGTTGGGTATGTTGTTATGATTGGATTGCGTCTCGTA
2747		
Db	21992	GGCCATATCAGATTTGAAGAAGATTGGTACAGTTGCATATGAGTTAGAAATTGCGTCAAA
21933		
Qy	2748	GTTGGGTTCCATTCACCTGGAGTTCCACGTGTTGATGTTGAAGAAGTGCATGGGTGATC
2807		
Db	21932	GTTGGGTTCCCGTTCATCCGGTATCCATGTTACGTTGAAGAATGCGATTGGAGATC
21873		
Qy	2808	CTTCCTTGATTGTCCTTTGGGGAGTGGTGTGTTATTCATATCCCTGCTTATGAGGTAT
2867		
Db	21872	ATTCTACGGTATTGCCAGTAGAGGGTATCAAAGTGACAGACTGCTTGCTTACGAAGAAG
21813		
Qy	2868	TCCTGATTGAGATTTGGATAGGAAAAGTCATTTGAGGAATAAGGATGTCCTCGA
2927		
Db	21812	AGCCCGTTGAAATTAGATGCCAAGTCGAGGAGCAAAAGTCGAGAAGCAACTGGAGTCAGAATATGACA
21753		
Qy	2928	TGAATGTTCTATTGAGGAATCATAGGTTGAAGAAGCTACTTGGGAAGCTAAAGAGGACA
2987		
Db	21752	TAAAGGTACTGTGGAGGAATCAAAGTCGAGAAGCAACTGGAGTCAGAATATGACA
21693		
Qy	2988	TGAGAGTCCAAATATCCATTCTGTTCCCT 3016
21692		
Db	21664	TGAGAATTAGATATCCAATTGTTGCT 21664

Claim Rejections - 35 USC § 102

Claims 2-3 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Olek et al (WO 200177384; published October 18, 2001).

The claims are directed to a primer for the detection of cucumber mosaic virus resistant plants which comprises consecutive nucleotides of SEQ ID NO: 2 or 22, said primer contains SEQ ID NO: 1, and a kit containing said primer.

Olek et al teach an oligonucleotide designated as SEQ ID NO: 52575 that contains Applicant's SEQ ID NO:1 (see alignment of sequences below) and a kit containing said oligonucleotide. Therefore, Olek et al teach all claim limitations.

```
RESULT 10
ABC52558/c
ID  ABC52558 standard; DNA; 13 BP.
XX
AC  ABC52558;
XX
DT 21-FEB-2002 (first entry)
XX
DE  Oligonucleotide SEQ ID NO 52575 for detecting SNP TSC0014584.
PI  Olek A, Piepenbrock C, Berlin K;
SQ  Sequence 13 BP; 3 A; 3 C; 5 G; 2 T; 0 U; 0 Other;
     Query Match          100.0%;  Score 10;  DB 1;  Length 13;
     Best Local Similarity 100.0%;
     Matches    10;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps
     0;
QY          1 GTCCCGACGA 10
                 |||||||||
Db          12 GTCCCGACGA 3
```

Claims 2-3 are rejected under 35 U.S.C. 102(b) as being anticipated by
Molyneux, Mitchell (US 6,337,071)

The claim is directed to a primer comprising consecutive nucleotides of SEQ ID NO: 2 or 22, wherein the primer has SEQ ID NO: 1.

Molyneux teaches a primer that is 100% identical to Applicant's SEQ ID NO: 1.

See alignment of sequences shown below.

```
RESULT 1
AR181979
LOCUS AR181979                      10 bp      DNA      linear    PAT 20-APR-
2002
DEFINITION Sequence 8 from patent US 6337071.
ACCESSION AR181979
VERSION AR181979.1  GI:20224895
KEYWORDS .
SOURCE Unknown.
ORGANISM Unknown.
           Unclassified.
REFERENCE 1 (bases 1 to 10)
AUTHORS Molyneux, W. Mitchell.
TITLE Mosquito and/or flea control
JOURNAL Patent: US 6337071-A 8 08-JAN-2002;
FEATURES Location/Qualifiers
  source 1 ..10
           /organism="unknown"
           /mol_type="unassigned DNA"
ORIGIN
Query Match          100.0%;  Score 10;  DB 9;  Length 10;
Best Local Similarity 100.0%;
Matches 10;  Conservative 0;  Mismatches 0;  Indels 0;  Gaps
0;
Qy          1 GTCCCGACGA 10
           |||||||||
Db          1 GTCCCGACGA 10
```

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of detecting a CMV-resistant plant using SEQ ID NO: 2 or 22, does not reasonably provide enablement for a method of detecting a CMV resistant plant using any consecutive nucleotide sequence of SEQ ID NO: 2 or 22. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or the invention commensurate in scope with these claims.

The claims are drawn to a method for detecting a CMV resistant plant or determining the genotype of a CMV resistant plant by analyzing the genomic DNA of a plant in the presence of a consecutive nucleotide sequence of SEQ ID NO: 2 or 22.

The specification provides guidance for the identification of an OPC-07 primer which showed specificity only to CMV resistant plants from a pool of F2 CMV resistant and susceptible plants (Figures 2a and 2b) and cloning and determination of nucleotide sequence of SEQ ID NO: 2 or 22 using SEQ ID NO: 1 and constructing the primers of SEQ ID NO: 23-28 from said nucleotide sequences. The specification also teaches analysis of the genomic DNA extracted from a CMV resistant plant, susceptible plant, and their F2 population used a template for PCR with the primer combination SEQ ID

NO: 23 and 24, SEQ ID NO: 23 and 25, and SEQ ID NO: 23 and 26, respectively to examine plant genotype (Examples 1-8; Table 2).

The specification, however, does not provide guidance for a method that employs any consecutive nucleotide sequence of any size capable of detecting a CMV resistant plant or capable of determining the genotype of a CMV resistant plant. The specification teaches that a combination of primers SEQ ID NO: 23 and 24, SEQ ID NO: 23 and 25, and SEQ ID NO: 23 and 26, is required in order to examine a CMV resistant plant genotype. The specification does not teach that a single exemplified or non-exemplified primer is sufficient to detect CMV resistance plant or to determine the genotype of a CMV resistant plant. The claims provide no more than an invitation to experiment a single primer of any size from the 5.0 Kb sequence of SEQ ID NO: 22 to see if it works in any plant species. This experimentation is considered excessive and undue, absent evidence to the contrary.

Sequence search results from the primers of the claims shows that the primers are not specific to CMV resistance. For example, SEQ ID NO: 28 is identical to a sequence from human genomic DNA containing a SNP SEQ ID NO: 11973 (see the alignment of sequences below. See, for example, Bharti,A.K et al who teach a nucleotide sequence (Accession no CG834049) that has Applicant's SEQ ID NO: 28 and would not detect a CMV resistant plant. Therefore, it is highly unpredictable that the use of any single primer that has a consecutive nucleotide sequence of SEQ ID NO: 22, wherein the primer is any of SEQ ID NO: 1 and 23-28 would detect a CMV resistant plant or determine the genotype of a CMV resistant plant. Therefore, given this lack of

unpredictability, the limited guidance and working examples in the specification, the state of the prior art as evidenced by Bharti et al and nature of the invention, one skilled in the art would have to proceed with undue trial and error experimentation to screen through the 5.2 Kb sequence of SEQ ID NO: 22 to identify those consecutive nucleotides of any length that are capable of identifying a CMV resistant plant and its genotype.

See, Genentech Inc. v. Novo NordiskA/S, 108 F.3d 1361, 1366, 42 USPQ2d 1001, 1005 (Fed. Cir. 1997) which states It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement". The Genentech court also held that [w]hile every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention". Id. In this case, as in Genentech, the specification does not provide the "reasonable detail to enable members of the public to understand and carry out the invention as broadly claimed".

Therefore, for all reasons discussed above the claimed invention is not enabled throughout the broad scope.

RESULT 3						
CG834049						
LOCUS	CG834049	295 bp	DNA	linear	GSS	12-NOV-
2003						
DEFINITION	ZMMBBC0140J06f ZMMBBC (EcoRI) Zea mays subsp. mays genomic clone					
	ZMMBBC0140J06 5', genomic survey sequence.					
ACCESSION	CG834049					

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VERSION CG834049.1 GI:38298448
KEYWORDS GSS.
SOURCE Zea mays subsp. mays (maize)

REFERENCE 1 (bases 1 to 295)
AUTHORS **Bharti, A.K.**, Young, S., Kavchok, S., Keizer, G., Bronzino, A.C.,

ORIGIN

Query Match 100.0%; Score 15; DB 22; Length 295;
Best Local Similarity 100.0%;
Matches 15; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GGGAGTTTCATCAGC 15
|||||||||||||||||
Db 81 GGGAGTTTCATCAGC 95

Remarks

Claims 1 and 4-10 are free of the prior art of record.

Claims 1 and 4-10 are allowable.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571)272-0797. The examiner can normally be reached on M-TH 8:00 am to 5:30 PM, and every other Friday from 8:00 AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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8/30/2010

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